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EXAMINER

DANIELSEN, NATHAN ANDREW

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/719,308	Applicant(s) COOKSON ET AL.	
	Examiner Nathan Danielsen	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-13 and 15-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-13 and 15-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 3-8, 10-13, and 15-31 are pending. Claims 2, 9, and 14 have been canceled and claims 21-31 have been added in applicant's amendment filed 12 January 2007.

Drawings

2. The drawings are objected to because: the output of buffer 132 in figure 2 lacks the appropriate label, such as the label "DATA OUT" shown in figure 3, and figure 11 has two elements both indicating that data from Side A is being sent to the processor when one should indicate that data from Side B is also being sent to the processor.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to under 37 CFR 1.78(a)(2)(i) because of the following informalities: the listing of related applications contains only application titles without the corresponding application serial numbers. Appropriate correction is required.

Claim Objections

4. The claims are objected to because:
- a. In claim 7, the first instance of “; and” should be --;--.
 - b. In claim 8, “arranged and constructed to read” should be changed to --reading--.
 - c. In claim 13, “disc reads” should be changed to --head reads--.
 - d. Claim 21 should end with a period.
 - e. In claim 26, “arrangemne” should be --arrangement-- and “saud” should be --said--.
- Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:
- The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
6. Claims 24 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
- a. Regarding claim 24, the specification discloses where rotation specific data can be stored in either a BCA or a bar code, but is silent as to how the rotation specific data defines the BCA/bar coding or how BCA/bar coding formats can be used as rotation specific data.
 - b. Regarding claim 31, the specification discloses where instructions are given to a user with the intent of allowing the user to operate a manual switch, where an error message can be given to the user, and where the rotational direction of the disc can be automatically reversed. However, the specification fails to disclose where instructions are given to the user and the rotational direction of the disc is automatically reversed.

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7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4-6, 10-12, 19, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 4 and 5 recite the limitation "said laser heads". Claim 6 recites the limitations "said laser head" and "one or the other of said data layers". Claim 10 recites the limitation "reading data from the second side of the disc", which lacks antecedent basis because claim 8 does not specify if only one side has data (and the other has, for example, a label) or if both sides have data. Claims 11 and 19 recite the limitation "either side of the disc", which lacks antecedent basis because claims 8 and 17 do not specify the number of data sides of the disc. Claim 12 recites the limitation "the other side", which lacks antecedent basis for the same reason as claims 11 and 19. Claim 22 recites the limitation "said display". There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 8, 15-17, 19, 23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishibashi et al (WO 01/18798 and US Patent 6,850,478; hereinafter Ishibashi).

Regarding claim 1, Ishibashi discloses a player for reading data from an optical disc having data disposed along a spiral comprising:

a controller generating a first command to rotate the optical disc in a first direction when the disc is first inserted into the player (col. 7, lines 3-6 and figure 3);

a motor receiving said first command and rotating the disc in said first direction (figure 3); and

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a first laser head positioned to read the data from the disc as the disc is rotated by the motor (figure 3);

wherein said controller is adapted to detect standard data in a predetermined area of the disc and if no data is detected, the controller generates a second command for reversing the rotation of said disc (col. 7, lines 3-65; where the "standard data" is the sync mark on a reproduction-only disc and the "no data" data is interpreted to be non-standard data, which includes reverse-oriented sync marks).

Regarding claim 8, Ishibashi discloses a player reading data from disc having at least one of two configurations, in one configuration the disc having data arranged along a right handed spiral, in the second configuration the disc having data arranged along a left handed spiral, said disc further including machine-readable rotation specific data indicating the proper direction of rotation of the disc (figures 1 and 3), comprising:

a reader arranged and constructed to read said rotation specific data from the disc to determine the proper direction of rotation of the disc (col. 7, lines 3-65 and figure 3);

a controller coupled to said reader and generating a command in response (col. 7, lines 3-65 and figure 3);

a motor receiving said command and rotating said disc in a corresponding direction (col. 7, lines 3-65 and figure 3); and

a first laser head positioned to read the data from the disc as the disc is rotated by the motor (col. 7, lines 3-65 and figure 3).

Regarding claim 15, Ishibashi discloses where said reader reads reverse data from the disc (col. 7, lines 3-65).

Regarding claim 16, Ishibashi discloses where said controller cooperates with said motor to rotate said disc in one of a first and second direction to determine the configuration of the disc (col. 7, lines 3-65).

Regarding claims 17 and 19, Ishibashi discloses a method of playing discs comprising:
inserting a disc in a player (inherent in optical disc players);

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rotating the disc in a predetermined direction for either side of the disc (col. 7, lines 3-65);

attempting to read data from said disc as the disc is rotating in said predetermined direction (col. 7, lines 3-65); and

if no data can be read from the disc, then generating a command signal (col. 7, lines 3-65; where the "standard data" is the sync mark on a reproduction-only disc and the "no data" data is interpreted to be non-standard data, which includes reverse-oriented sync marks).

Regarding claim 23, Ishibashi discloses where in response to said second command the motor reverses the direction of rotation of the disc (col. 7, lines 3-65).

Regarding claim 25, Ishibashi discloses where said rotation specific data includes a signal having a predetermined signal with a predetermined shape (col. 7, lines 3-65 and figure 4; where the pattern of marks/spaces in the sync code have a predetermined shape).

12. Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by O'Hara et al (US Patent 5,418,774; hereinafter O'Hara).

Regarding claim 26, O'Hara discloses a player for reading a disc having a first side and a second side with a first data layer on said first side and a second data layer on said second side, said data layers including data arranged along a spiral extending in the same direction as viewed from the respective side of the disc (figures 1a and figure 4), said player comprising:

a first head disposed to read data from said first side (elements 1, 2, 4, 5a, 6a, 7a, 9a, 11, 12, 13a, 14a, 15a, 16, 17, and 19 in figure 1);

a second head disposed to read data from said second side (elements 1, 2, 4, 5b, 6b, 7b, 9b, 11, 12, 13b, 14b, 15b, 16, 17, and 19 in figure 1);

a motor rotating the disc in a first direction corresponding to the arrangement of the spiral on the first side, said motor rotating the disc in a second direction opposite said first direction corresponding to the arrangement of the spiral on the second side (col. 7, line 44 through col. 8, line 2); and

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a controller controlling the operation of said motor for rotating said disc in said first direction to read said first side and for rotating the disc in the second direction for reading said second side (col. 7, line 44 through col. 8, line 2).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3-5, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Yamauchi (JP Patent Application Publication 11-007669).

Regarding claims 3-5, 10, and 11, Ishibashi discloses everything claimed, as applied to claim 1. However, Ishibashi fails to disclose a second laser head, a second data side, and how data can be read from the disc.

In the same field of endeavor, Yamauchi discloses where the player further comprises a second laser head positioned adjacent to respective sides of the disc (figures 1 and 3), where said laser heads read data from said sides sequentially or simultaneously (suggested by the combination of ¶s 17, 26, and 35) while the disc rotates in the same direction (¶ 26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized two read heads, each facing one side of a disk and reading data either sequentially or simultaneously, as taught by Yamauchi, for the purpose of increasing the data transfer rate to and from the disc (¶ 26).

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15. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Iida et al (US Patent 5,702,792; hereinafter Iida).

Regarding claims 6 and 13, Ishibashi discloses everything claimed, as applied to claims 1 and 8, respectively. However, Ishibashi fails to disclose a double-sided, multilayer disc.

In the same field of endeavor, Iida discloses where said disc has a data side with at least two data layers (figure 6), wherein said laser head is adapted to read data selectively from one or the other of said data layers (col. 7, line 60 through col. 8, line 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ishibashi to provide functionality for using the disc of Iida, for the purpose of increasing the storage capacity of the disc (col. 1, lines 46-50 and col. 2, lines 57-64).

16. Claim 7, 18, 21, 22, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Gotoh et al (US Patent 5,694,387; hereinafter Gotoh).

Regarding claims 7, 18, 21, and 22, Ishibashi discloses everything claimed, as applied to claim 1 and 17. Additionally, Ishibashi discloses where the player further comprises a manual selector for the selection of the direction of said disc, said rotation detector being coupled to said manual selector (col. 11, lines 40-45). However, Ishibashi fails to explicitly disclose a display providing instructions to a user and the action to be taken by the user.

In the same field of endeavor, Gotoh discloses a player comprising a display providing instructions to a user (col. 9, lines 60-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the functionality and components of Gotoh, for the purpose of informing the user that user intervention is required in order for the player to properly reproduce data from an optical disc (col. 9, lines 34-64).

Regarding claim 31, Ishibashi, in view of Gotoh, discloses everything claimed, as applied to claim 18. Additionally, Ishibashi discloses where the rotation of the disc is automatically reversed in response to said control signal (col. 11, lines 40-45).

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17: Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of applicant's admitted prior art (hereinafter the AAPA).

Regarding claims 12 and 20, Ishibashi discloses everything claimed, as applied to claims 8 and 17. However, Ishibashi fails to disclose reversing the direction of rotation based on the side of the disc to be reproduced.

In the same field of endeavor, the AAPA discloses where the method further comprises rotating the disc in a first direction for the first side of the disc and rotating the disc in an opposite direction for the second side of the disc (first full paragraph on page 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have reversed the direction of rotation of the optical disc based on which side was to be read, as taught by the AAPA, for the purpose of not having to flip the disc over to read the second side (paragraph starting on page 3 and ending on page 4). 12. The player of claim 8 wherein said motor rotates the disc in one direction when reading data from one side and the other direction when reading data from the other side.

18. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Tomita et al (US Patent Application Publication 2003/0202436; hereinafter Tomita).

Regarding claim 24, Ishibashi discloses everything claimed, as applied to claim 8. However, Ishibashi fails to disclose where rotation specific data is stored in a BCA or bar code.

In the same field of endeavor, Tomita discloses storing data in a BCA, where this data indicates a specific operating condition of the apparatus intending to reproduce data from the disc (§ 74).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the functionality of the apparatus of Tomita, for the purpose of providing data indicating a specific operating condition of an optical disc reproduction apparatus that is accessible in such a way as to quickly allow the reproduction of information (§ 15).

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19. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Hara, in view of Iida and Ito et al (US Patent 5,881,032; hereinafter Ito).

Regarding claim 27, O'Hara discloses everything claimed, as applied to claim 26. However, Ishibashi fails to disclose a double-sided, multilayer disc and how to reproduce data from each of the layers.

In the same field of endeavor, Iida discloses where said disc includes more than one data layer on one of said sides (figure 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ishibashi to provide functionality for using the disc of Iida, for the purpose of increasing the storage capacity of the disc (col. 1, lines 46-50 and col. 2, lines 57-64). However, Iida fails to explicitly disclose how to reproduce data from each of the layers.

In the same field of endeavor, Ito discloses where said player rotates said disc in the same direction for all the data layers on one of said sides (col. 9, lines 19-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the functionality of the apparatus of O'Hara to reproduce data from the disc of Iida using the address format of Ito, for the purpose of realizing contiguous reproduction of data (col. 4, lines 31-46).

Regarding claim 28, O'Hara, in view of Iida, discloses everything claimed, as applied to claim 27. Additionally, O'Hara discloses where data is arranged on both sides radially outwardly (col. 7, line 44 through col. 8, line 2).

Regarding claim 29, O'Hara, in view of Iida, discloses everything claimed, as applied to claim 27. Additionally, O'Hara discloses where data is arranged on both sides radially inwardly (col. 7, line 44 through col. 8, line 2).

Regarding claim 30, O'Hara, in view of Iida, discloses everything claimed, as applied to claim 27. Additionally, O'Hara discloses where data is arranged to be read in one radial direction on one side wherein data is arranged to be read in the opposite radial direction on the other side (col. 8, lines 3-24).

Response to Arguments

20. Applicant's arguments filed 12 January 2007 have been fully considered but they are not persuasive.

- a. In response to applicant's argument that Ishibashi "only discusses address information" and thus fails to appreciate rotating the disc in a default direction and reversing the direction of rotation based on detecting no data (pages 10 and 11), the examiner disagrees. As defined above (see claim 1), the "standard data" is the sync mark on the reproduction-only disc and the "no data" data is interpreted to be non-standard data, which includes reverse-oriented sync marks, because no standard data was detected. Therefore, the use of Ishibashi in the rejections is proper and the rejections are maintained.
- b. In response to applicant's argument that "the problems of reading data in spirals is completely ignored by O'Hara" and "has no bearing to the present invention" (page 11), the examiner disagrees. O'Hara discusses the orientation of the data spirals on each side of an optical disc in col. 7, line 44 through col. 8, line 24. Therefore, the use of O'Hara in the rejections is proper and the rejections are maintained.
- c. All other arguments presented by applicant in this response have been considered but are moot in view of the new ground(s) of rejection.

Citation of Relevant Prior Art

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Jeon et al (US Patent Application Publication 2005/0099916) discloses additional data that may be placed in a BCA; and
- b. Gushima et al (US Patent 5,506,825), Revis (US Patent Application Publication 2003/0123338), Funabashi et al (US Patent 5,097,465), Takizawa et al (US Patent 5,311,497), Okazaki (JP Patent Application Publications 63-268160 and 63-244315), Fujimura (JP Patent Application Publication 10-021633), and Shimada et al (WO

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2004/015699) disclose an apparatus having a plurality of recording/reproducing heads for recording/reproducing on/from double-sided optical discs.

Closing Remarks/Comments

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:00 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Danielsen
03/30/2007

ND


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER